Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

solve trinomial equations of all degrees with any coefficients. S. Gundelfinger, *Tafeln zur Berechnung der reellen Wurzeln sämtlicher trinomischer Gleichungen* (Leipzig, 1897).

For references to the literature of trinomial equations, see the article, R. Mehmke, *Calculs numériques*, in the *Encyclopédie des Sciences Mathématiques*, tome I, Volume 4, I 23.

In § 41, pages 320-325, the following method is given.

In $A\beta^2+C\beta^{1.6}=W$, put $\beta=kx^n$. Then $Ak^2x^{2n}+Ck^{1.6}x^{1.6n}=W$.

Let $1.6n=1$, whence $n=\frac{1}{1.6}=.625$.

Let $Ak^2=Ck^{1.6}$, whence $Ak^{0.4}=C$, and $k=\left(\frac{C}{A}\right)^{2.5}$.

Then equation reduces to $x^{1.25}+x=D$.

Make a table of values of $x^{1.25}+x$ for different values of x with as small an interval as desired. Then any given equation may be solved by simple interpolation.

For graphic solution (by nomography), see Articles 45, 51, 61; also M. d'Ocagne, *Traité de Nomographie* (Paris, 1899), pages 367, 387.

Another method is given by F. Schlepps, *Euber die Auflösung trinomischer Gleichungen aller Grade* (Halle a. S. (1899), 15 pages). [See *Jahrbuch ü. d. Fortschritté der Math.*, Vol. 30, page 104.]

GEOMETRY.

400. Proposed by FRANCIS RUST, C. E., Pittsburgh, Pennsylvania.

Given a circle and a point P without; construct, *using the straight edge only*, the two tangents to the circle through P.

Solution by H. E. TREFETHEN, Colby College, Waterville, Maine; H. C. FEEMSTER, York College, York, Nebraska, and ELMER SCHUYLER, New York City.

From P draw two secants and complete the inscribed quadrilateral thus determined. Let PQ be the external diagonal and R the point of intersection of the internal diagonals. Hence each side of the triangle PQR is the polar of the opposite vertex and QR cuts the circle in S and T, the points of contact of the required tangents PS and PT. Thus the construction is effected with the ruler only.

Also solved by M. E. Graber and E. B. Escott.

401. Proposed by F. H. SAFFORD, Ph. D., The University of Pennsylvania.

Find by Euclidean geometry a point whose distances from the vertices of an equilateral triangle are in the ratio 3:4:5. The general case of ratio $a:b:c$ would prove interesting.

I. Solution by W. J. GREENSTREET, M. A., Editor The Mathematical Gazette, Burgfield, England.

Let ABC be any triangle. The locus of a point P such that $PA:PB=x:y$ is well known to be a circle. Let the circular loci of the points P given